WEST Search History

10/697,419

Hide Items | Restore | Clear | Cancel

DATE: Wednesday, April 19, 2006

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ	
☐	L8	(amino near2 acid) same L6	5
☐	L7	leucine same L6	1
☐	L6	express$5 same L5	32
☐	L5	(gene or sequence or polynucleotide or clone)same L2	35
☐	L4	luminescens same L3	2
☐	L3	express$5 same L2	33
☐	L2	(codon-optimiz$5 or(codon near2 optimiz$5)) same L1	36
☐	L1	(LuxA or luciferase)	26950

END OF SEARCH HISTORY

=> index bioscience medicine

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 16:02:26 ON 19 APR 2006

73 FILES IN THE FILE LIST IN STNINDEX

=> s (LuxA or luciferase#)
10 FILE ADISCTI
24 FILE ADISINSIGHT
10 FILE ADISNEWS
1006 FILE AGRICOLA
310 FILE ANABSTR
11 FILE ANTE
69 FILE AQUALINE
410 FILE AQUASCI
1467 FILE BIOENG
17125 FILE BIOSIS
3488 FILE BIOTECHABS
3488 FILE BIOTECHDS
8392 FILE BIOTECHNO
1875 FILE CABA
18807 FILE CAPLUS
261 FILE CEABA-VTB
55 FILE CIN
147 FILE CONFSCI
5 FILE CROPB
78 FILE CROPU
57 FILE DDFB
921 FILE DDFU
7953 FILE DGENE
973 FILE DISSABS
57 FILE DRUGB
2499 FILE DRUGU
202 FILE EMBAL
13131 FILE EMBASE
9683 FILE ESBIOBASE
511 FILE FEDRIP
153 FILE FROSTI
220 FILE FSTA
1629 FILE GENBANK
13 FILE HEALSAFE
3262 FILE IFIPAT
7 FILE IMSDRUGNEWS
11 FILE IMSRESEARCH
41 FILES SEARCHED...
1205 FILE JICST-EPLUS
23 FILE KOSMET
6531 FILE LIFESCI
18120 FILE MEDLINE
22 FILE NIOSHTIC
133 FILE NTIS
85 FILE OCEAN
5189 FILE PASCAL
10 FILE PHAR
2 FILE PHARMAML
31 FILE PHIN
365 FILE PROMT
554 FILE PROUSDDR
4 FILE RDISCLOSURE
13825 FILE SCISEARCH
9178 FILE TOXCENTER
23018 FILE USPATFULL
2316 FILE USPAT2
2 FILE VETB

12 FILE VETU
77 FILE WATER
2093 FILE WPIDS
4 FILE WPIFV
2093 FILE WPINDEX
114 FILE IPA
15 FILE NAPRALERT
427 FILE NLDB

64 FILES HAVE ONE OR MORE ANSWERS, 73 FILES SEARCHED IN STNINDEX

L1 QUE (LUXA OR LUCIFERASE#)

=> d rank

F1	23018	USPATFULL
F2	18807	CAPLUS
F3	18120	MEDLINE
F4	17125	BIOSIS
F5	13825	SCISEARCH
F6	13131	EMBASE
F7	9683	ESBIOBASE
F8	9178	TOXCENTER
F9	8392	BIOTECHNO
F10	7953	DGENE
F11	6531	LIFESCI
F12	5189	PASCAL
F13	3488	BIOTECHABS
F14	3488	BIOTECHDS
F15	3262	IFIPAT
F16	2499	DRUGU
F17	2316	USPAT2
F18	2093	WPIDS
F19	2093	WPINDEX
F20	1875	CABA
F21	1629	GENBANK
F22	1467	BIOENG
F23	1205	JICST-EPLUS
F24	1006	AGRICOLA
F25	973	DISSABS

=> file f1-f9, f11-f13, f15, f18

FILE 'USPATFULL' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'CAPLUS' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'MEDLINE' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'BIOSIS' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'SCISEARCH' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'EMBASE' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'ESBIOBASE' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'TOXCENTER' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'BIOTECHNO' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'LIFESCI' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'PASCAL' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'BIOTECHABS' ACCESS NOT AUTHORIZED

FILE 'IFIPAT' ENTERED AT 16:04:47 ON 19 APR 2006

FILE 'WPIDS' ENTERED AT 16:04:47 ON 19 APR 2006

=> s L1
L2 148354 L1

=> s (gene or sequence or polynucleotide or clone)(s)L2
9 FILES SEARCHED...
L3 77196 (GENE OR SEQUENCE OR POLYNUCLEOTIDE OR CLONE)(S) L2

=> s (codon-optimiz? or(codon(w)optimiz?))(s)L3
L4 50 (CODON-OPTIMIZ? OR(CODON(W) OPTIMIZ?))(S) L3

=> s leucine (s)L4
L5 2 LEUCINE (S) L4

=> s (amino(w)acid)(s)L4
2 FILES SEARCHED...
L6 6 (AMINO(W) ACID)(S) L4

=> s luminescens?(s)L4
L7 1 LUMINESCENS?(S) L4

=> dup rem l4
PROCESSING COMPLETED FOR L4
L8 24 DUP REM L4 (26 DUPLICATES REMOVED)

=> dup rem l5
PROCESSING COMPLETED FOR L5
L9 2 DUP REM L5 (0 DUPLICATES REMOVED)

=> d ibib abs l9 1-2

L9 ANSWER 1 OF 2 USPATFULL on STN
ACCESSION NUMBER: 2004:184473 USPATFULL
TITLE: Modified luciferase nucleic acids and methods of use ✓
INVENTOR(S): Patterson, Stacey, Tampa, FL, UNITED STATES
Gupta, Rakesh, New Delhi, INDIA
Sayler, Gary, Blaine, TN, UNITED STATES
Dionisi, Hebe, Chubut, ARGENTINA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004142356	A1	20040722
APPLICATION INFO.:	US 2003-697419	A1	20031030 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-422467P	20021030 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Stanley A. Kim, Ph.D., Esq., Akerman Senterfitt, Suite 400, 222 Lakeview Avenue, West Palm Beach, FL, 33402-3188
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1477
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The luxA and luxB genes from P. luminescens which encode for the luciferase protein of the bacterial luciferase system were modified to generate codon-optimized versions that are optimized for expression in mammalian cells. The codon-optimized bacterial luciferase enzyme system genes of the invention can be used to develop a mammalian bioluminescence bioreporter useful in various medical research and diagnostics applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 2 OF 2 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10639759 IFIPAT;IFIUDB;IFICDB
TITLE: RAPIDLY DEGRADED REPORTER FUSION PROTEINS
INVENTOR(S): Almond; Brian, Fitchburg, WI, US
Ma; Dongping, Madison, WI, US
Wood; Keith V., Mt. Horeb, WI, US
Wood; Monika G., Mt. Horeb, WI, US
Zdanovskaia; Marina, Madison, WI, US
Zdanovsky; Alexey, Madison, WI, US
PATENT ASSIGNEE(S): Promega Corporation, US
AGENT: Schwegman, Lundberg, Wossner & Kluth, P.A., P.O. Box 2938, Minneapolis, MN, 55402, US

	NUMBER	PK	DATE
PATENT INFORMATION:	US 2004146987	A1	20040729
APPLICATION INFORMATION:	US 2003-664341		20030916

	NUMBER	DATE
PRIORITY APPLN. INFO.:	US 2002-411070P	20020916 (Provisional)
	US 2002-412268P	20020920 (Provisional)

FAMILY INFORMATION: US 2004146987 20040729
DOCUMENT TYPE: Utility
Patent Application - First Publication
FILE SEGMENT: CHEMICAL
APPLICATION

PARENT CASE DATA:

This application claims the benefit of the filing date of U.S. application Serial No. 60/411,070, filed Sep. 16, 2002 and U.S. application Ser. No. 60/412,268, filed Sep. 20, 2002, the disclosures of which are incorporated by reference herein.

NUMBER OF CLAIMS: 45 18 Figure(s).
DESCRIPTION OF FIGURES:
FIG. 1A. Lysates of CHO cells containing plasmid pwtLuc1 (lane 2), pUbiq(Y)Luc19 (lane 3) or pLuc-PESTIO (lane 4), or a CHO lysate without plasmid (lane 5), were separated on 4-20% SDSPAGE, transferred on to an ImmobilonP membrane and ***luciferase*** species were detected with rabbit anti-firefly ***luciferase*** and anti-rabbit antibodies conjugated with alkaline phosphatase. Lane 1 corresponds to See Blue Pre-Stained Standard from Invitrogen.
FIG. 1B. Proteins translated with wheat germ extracts containing mRNA obtained using plasmid pwtLuc1 (lane 1) or pETUbiqLuc (lane 2), or without external mRNA (lane 3), were separated on 4-20% SDS-PAGE and the proteins visualized by autoradiography.
FIG. 1C. TNT (reg) T7 Coupled Reticulocyte Lysates containing plasmid pETwtLuc1 (lane 1), pT7Ubiq(Y)Luc19.2 (lane 2), pT7 Ubiq(E)Luc19.1 (lane 3) or pT7Luc-PEST10 (lane 4), were separated on 4-20% SDS-PAGE and the proteins visualized by autoradiography.
FIG. 2. Plasmids encoding wild-type firefly ***luciferase*** and fusion proteins comprising firefly ***luciferase*** were expressed in TNT (reg) T7 Coupled Reticulocyte Lysate System. Specific activity was determined as the ratio between total ***luciferase*** activity accumulated in each mixture and the amount of (3H) ***Leucine*** incorporated in each protein.

FIG. 3. Cells transiently transfected with plasmids encoding wild-type firefly ***luciferase*** (pwtLuc1), a ubiquitin- ***luciferase*** fusion protein (pUbiq(Y)Luc19 and pT7Ubiq(Y)Luc19.2), or a fusion protein comprising firefly ***luciferase*** and a mutant form of C-ODC (mODC) (pLuc-PEST10) were treated with cycloheximide (100 mu g/ml) for different periods of time. Upon completion of incubation, and to define stability, cells were lysed, and accumulated ***luciferase*** activity was determined using a MLX Microtiter Plate Luminometer.

FIG. 4. CHO (A), COS-7 (B), and HeLa (C) cells, transfected with ubiquitin- ***luciferase*** fusion protein encoding plasmids, were treated with cycloheximide for different periods of time. Cellular luminescence was measured to determine the stability of the corresponding proteins. Control cells that had not been treated with cycloheximide were used to determine background ***luciferase*** activity.

FIG. 5. The partial amino acid ***sequence*** of ubiquitin- ***luciferase*** fusion proteins was evaluated in establishing the relative importance of the N-terminal residue in determining protein half-life. Shadowed/boxed areas mark ubiquitin and ***luciferase*** sequences. Thick lines mark the position of deletions.

FIG. 6. CHO (A) and COS-7 (B) cells were transiently transfected with plasmids encoding either wild-type firefly ***luciferase*** (pwtLuc1) or ubiquitin- ***luciferase*** fusion proteins with different N-terminal ***luciferase*** amino acid residues. Twentyfour hours after transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time and, upon completion of incubation, luminescence of accumulated ***luciferase*** was measured.

FIG. 7. HeLa cells were transfected with plasmids encoding wildtype ***luciferase*** (pwtLuc1), a fusion protein comprising ***luciferase*** and mODC (pLuc-PEST10), or a fusion protein comprising ubiquitin, firefly ***luciferase*** , and mODC (pUbiq(Y)LucPEST5, pUbiq(R)Luc-PEST12, pT7Ubiq(E)Luc-PEST23 and pT7Ubiq(E) hLuc+PEST80). Twenty-four hours after transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time. Cellular luminescence was measured to determine the stability of the corresponding ***luciferase*** (A). Control cells that had not been treated with cycloheximide were used to compare the ***luciferase*** activity of different constructs (B).

FIG. 8. CHO cells were transiently transfected with various plasmids. Twenty-four hours post-transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time. After incubation, luminescence due to accumulated ***luciferase*** was measured. Control cells that had not been treated with cycloheximide were used to determine background ***luciferase*** activity.

FIG. 9. Comparison of ***luciferase*** fusicn protein properties in a tet inducible system after doxycycline (2 mu g/ml) (A) or cycloheximide (100 mu g/ml) (B) treatment. Luminescence data from control cells that had not been treated with either doxycycline or cycloheximide are depicted in panel C.

FIGS. 10A-B. Comparison of ***luciferase*** fusion protein properties Renilla ***luciferase*** (A) and firefly ***luciferase*** (B) in a heat shock inducible system.

FIG. 11. Schematic of selected vectors.

FIGS. 12A-B. Induction of luminescence in D293 cells transiently transfected with Renilla ***luciferase*** vectors with multiple CREs, forskolin (10 mu M) and isoproterenol (0.25 mu M).

FIGS. 13A-B. Luminescence profiles of hCG-D293 cells transiently transfected with vectors encoding stable and destabilized versions of firefly ***luciferase*** . Cells were treated with isoproterenol (1 mu M) and Ro-20-1724 (100 mu M) or isoproterenol (1 mu M) and Ro-20-1724 (100 mu M) followed by treatment with human chorionic gonadotropin (hCG) (10 ng/ml) and Ro-20-1724 (100 mu M). Arrows indicate time points when chemicals were added to the cell cultures.

FIG. 14. Luminescence versus fold induction in D293 cells stably transfected with destabilized vectors. Cells were treated with forskolin (10 mu M) for 7 hours or incubated in forskolin-free media. All vectors were under the control of a cAMP regulated promoter.

FIG. 15. Fold induction by isoproterenol and prostaglandin E1 (PGE1) in 293 cells transfected with ***codon*** ***optimized*** firefly or Renilla ***luciferase*** in conjunction with destabilization sequences in a CRE system. (A)-(B): PGE1 added 24 hours after Iso/Ro; (C)-(D): PGE1 added 6 hours after Iso/Ro.

FIG. 16. Fold induction by isoproterenol in 293 cells transfected with either

red (CBR) (B) or green (CBG) (A) click beetle sequences in conjunction with destabilization sequences in a CRE system

AB A fusion polypeptide comprising a protein of interest which has a reduced half-life of expression, and a nucleic acid molecule encoding the fusion polypeptide, are provided.

CLMN 45 18 Figure(s).

FIG. 1A. Lysates of CHO cells containing plasmid pwtLuc1 (lane 2), pUbiq(Y)Luc19 (lane 3) or pLuc-PESTIO (lane 4), or a CHO lysate without plasmid (lane 5), were separated on 4-20% SDSPAGE, transferred on to an ImmobilonP membrane and ***luciferase*** species were detected with rabbit anti-firefly ***luciferase*** and anti-rabbit antibodies conjugated with alkaline phosphatase. Lane 1 corresponds to See Blue Pre-Stained Standard from Invitrogen.

FIG. 1B. Proteins translated with wheat germ extracts containing mRNA obtained using plasmid pwtLuc1 (lane 1) or pETUbiqLuc (lane 2), or without external mRNA (lane 3), were separated on 4-20% SDS-PAGE and the proteins visualized by autoradiography.

FIG. 1C. TNT (reg) T7 Coupled Reticulocyte Lysates containing plasmid pETwtLuc1 (lane 1), pT7Ubiq(Y)Luc19.2 (lane 2), pT7 Ubiq(E)Luc19.1 (lane 3) or pT7Luc-PEST10 (lane 4), were separated on 4-20% SDS-PAGE and the proteins visualized by autoradiography.

FIG. 2. Plasmids encoding wild-type firefly ***luciferase*** and fusion proteins comprising firefly ***luciferase*** were expressed in TNT (reg) T7 Coupled Reticulocyte Lysate System. Specific activity was determined as the ratio between total ***luciferase*** activity accumulated in each mixture and the amount of (3H) ***Leucine*** incorporated in each protein.

FIG. 3. Cells transiently transfected with plasmids encoding wild-type firefly ***luciferase*** (pwtLuc1), a ubiquitin- ***luciferase*** fusion protein (pUbiq(Y)Luc19 and pT7Ubiq(Y)Luc19.2), or a fusion protein comprising firefly ***luciferase*** and a mutant form of C-ODC (mODC) (pLuc-PEST10) were treated with cycloheximide (100 mu g/ml) for different periods of time. Upon completion of incubation, and to define stability, cells were lysed, and accumulated ***luciferase*** activity was determined using a MLX Microtiter Plate Luminometer.

FIG. 4. CHO (A), COS-7 (B), and HeLa (C) cells, transfected with ubiquitin- ***luciferase*** fusion protein encoding plasmids, were treated with cycloheximide for different periods of time. Cellular luminescence was measured to determine the stability of the corresponding proteins. Control cells that had not been treated with cycloheximide were used to determine background ***luciferase*** activity.

FIG. 5. The partial amino acid ***sequence*** of ubiquitin- ***luciferase*** fusion proteins was evaluated in establishing the relative importance of the N-terminal residue in determining protein half-life. Shadowed/boxed areas mark ubiquitin and ***luciferase*** sequences. Thick lines mark the position of deletions.

FIG. 6. CHO (A) and COS-7 (B) cells were transiently transfected with plasmids encoding either wild-type firefly ***luciferase*** (pwtLuc1) or ubiquitin- ***luciferase*** fusion proteins with different N-terminal ***luciferase*** amino acid residues. Twentyfour hours after transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time and, upon completion of incubation, luminescence of accumulated ***luciferase*** was measured.

FIG. 7. HeLa cells were transfected with plasmids encoding wildtype ***luciferase*** (pwtLuc1), a fusion protein comprising ***luciferase*** and mODC (pLuc-PEST10), or a fusion protein comprising ubiquitin, firefly ***luciferase***, and mODC (pUbiq(Y)LucPEST5, pUbiq(R)Luc-PEST12, pT7Ubiq(E)Luc-PEST23 and pT7Ubiq(E) hLuc+PEST80). Twenty-four hours after transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time. Cellular luminescence was measured to determine the stability of the corresponding ***luciferase*** (A). Control cells that had not been treated with cycloheximide were used to compare the ***luciferase*** activity of different constructs (B).

FIG. 8. CHO cells were transiently transfected with various plasmids. Twenty-four hours post-transfection, the cells were treated with cycloheximide (100 mu g/ml) for different periods of time. After incubation, luminescence due to accumulated ***luciferase*** was measured. Control cells that had not been treated with cycloheximide were used to determine background ***luciferase*** activity.

FIG. 9. Comparison of ***luciferase*** fusion protein properties in a tet inducible system after doxycycline (2 mu g/ml) (A) or cycloheximide (100 mu g/ml) (B) treatment. Luminescence data from control cells that had not been treated with either doxycycline or cycloheximide are depicted in panel C.
FIGS. 10A-B. Comparison of ***luciferase*** fusion protein properties Renilla ***luciferase*** (A) and firefly ***luciferase*** (B) in a heat shock inducible system.
FIG. 11. Schematic of selected vectors.
FIGS. 12A-B. Induction of luminescence in D293 cells transiently transfected with Renilla ***luciferase*** vectors with multiple CREs, forskolin (10 mu M) and isoproterenol (0.25 mu M).
FIGS. 13A-B. Luminescence profiles of hCG-D293 cells transiently transfected with vectors encoding stable and destabilized versions of firefly ***luciferase*** . Cells were treated with isoproterenol (1 mu M) and Ro-20-1724 (100 mu M) or isoproterenol (1 mu M) and Ro-20-1724 (100 mu M) followed by treatment with human chorionic gonadotropin (hCG) (10 ng/ml) and Ro-20-1724 (100 mu M). Arrows indicate time points when chemicals were added to the cell cultures.
FIG. 14. Luminescence versus fold induction in D293 cells stably transfected with destabilized vectors. Cells were treated with forskolin (10 mu M) for 7 hours or incubated in forskolin-free media. All vectors were under the control of a cAMP regulated promoter.
FIG. 15. Fold induction by isoproterenol and prostaglandin E1 (PGE1) in 293 cells transfected with ***codon*** ***optimized*** firefly or Renilla ***luciferase*** in conjunction with destabilization sequences in a CRE system. (A)-(B): PGE1 added 24 hours after Iso/Ro; (C)-(D): PGE1 added 6 hours after Iso/Ro.
FIG. 16. Fold induction by isoproterenol in 293 cells transfected with either red (CBR) (B) or green (CBG) (A) click beetle sequences in conjunction with destabilization sequences in a CRE system

=> d ibib abs l8 1-24

L8 ANSWER 1 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2006:80402 USPATFULL
TITLE: Synthetic nucleic acid molecule compositions and methods of preparation
INVENTOR(S): Wood, Keith V., Mt. Horeb, WI, UNITED STATES
Wood, Monika G., Mt. Horeb, WI, UNITED STATES
Almond, Brian, Fitchburg, WI, UNITED STATES
Paguio, Aileen, Madison, WI, UNITED STATES
Fan, Frank, Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006068395	A1	20060330
APPLICATION INFO.:	US 2004-943508	A1	20040917 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, 1600 TCF TOWER, 121 SOUTH EIGHT STREET, MINNEAPOLIS, MN, 55402, US
NUMBER OF CLAIMS: 69
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 9488
AB A method to prepare synthetic nucleic acid molecules having reduced inappropriate or unintended transcriptional characteristics when expressed in a particular host cell.

L8 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2006:107396 CAPLUS
DOCUMENT NUMBER: 144:250287
TITLE: Real-time monitoring of chloroplast gene expression by a luciferase reporter: evidence for nuclear regulation of chloroplast circadian period
AUTHOR(S): Matsuo, Takuya; Onai, Kiyoshi; Okamoto, Kazuhisa; Minagawa, Jun; Ishiura, Masahiro

CORPORATE SOURCE: Center for Gene Research, Graduate School of Science, Nagoya University, Furo, Chikusa, Nagoya, 464-8602, Japan
SOURCE: Molecular and Cellular Biology (2006), 26(3), 863-870
CODEN: MCEBD4; ISSN: 0270-7306
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chloroplast-encoded genes, like nucleus-encoded genes, exhibit circadian expression. How the circadian clock exerts its control over chloroplast gene expression, however, is poorly understood. To facilitate the study of chloroplast circadian ***gene*** expression, we developed a ***codon*** - ***optimized*** firefly ***luciferase*** ***gene*** for the chloroplast of Chlamydomonas reinhardtii as a real-time bioluminescence reporter and introduced it into the chloroplast genome. The bioluminescence of the reporter strain correlated well with the circadian expression pattern of the introduced gene and satisfied all three criteria for circadian rhythms. Moreover, the period of the rhythm was lengthened in per mutants, which are phototactic rhythm mutants carrying a long-period gene in their nuclear genome. These results demonstrate that chloroplast gene expression rhythm is a bona fide circadian rhythm and that the nucleus-encoded circadian oscillator dets. the period length of the chloroplast rhythm. Our reporter strains can serve as a powerful tool not only for anal. of the circadian regulation mechanisms of chloroplast gene expression but also for a genetic approach to the mol. oscillator of the algal circadian clock.
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2006:158363 CAPLUS
TITLE: Visualizing fungal infections in living mice using bioluminescent pathogenic Candida albicans strains transformed with the firefly luciferase gene
AUTHOR(S): Doyle, Timothy C.; Nawotka, Kevin A.; Kawahara, Carole Bellinger; Francis, Kevin P.; Contag, Pamela R.
CORPORATE SOURCE: Xenogen Corporation, Alameda, CA, 94501, USA
SOURCE: Microbial Pathogenesis (2006), 40(2), 82-90
CODEN: MIPAEV; ISSN: 0882-4010
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Animal studies with Candida albicans have provided models for understanding fungal virulence and antifungal drug development. To non-invasively monitor long-term Candida murine infections, clin. isolates were stably transformed with a ***codon*** - ***optimized*** ***luciferase*** ***gene*** to constitutively express ***luciferase*** . Chronic systemic infections were established in mice with engineered strains, and bioluminescent signals were apparent from kidneys by non-invasive imaging using charged-coupled device cameras. These infections were established in immune-competent mice, and bioluminescence was detectable in animals that showed no physiol. consequence of infection, as well as those visually succumbing to the disease. Similarly, bioluminescence was measured from the vaginal tissue of mice infected vaginally. Fungal loads detd. by plating vaginal lavages showed a similar pattern to the bioluminescent signals measured, and fungal infection could be detected in animals for over 30 days post infection by both modalities. The effect of the antifungal drug miconazole was tested in this model, and clearance in animals was apparent by both direct imaging and fungal load detn. The use of bioluminescence to monitor these and other models of Candida infections will greatly speed up the anal. of drug development studies, both in ease of visualizing infections and decreasing nos. of animals required to run such studies.

L8 ANSWER 4 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:305852 USPATFULL
TITLE: Renilla reniformis fluorescent proteins, nucleic acids encoding the fluorescent and the use thereof in diagnostics, high throughput screening and novelty items

INVENTOR(S): Bryan, Bruce, Pinetop, AZ, UNITED STATES
Szent-Gyorgyi, Christopher, Pittsburgh, PA, UNITED STATES
Szczepaniak, William, Burlington, VT, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005266491	A1	20051201
APPLICATION INFO.:	US 2005-179411	A1	20050712 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-808898, filed on 15 Mar 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-189691P	20000315 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Lara A. Northrop, Pietragallo, Bosick & Gordon, One Oxford Centre, 38th Floor, 301 Grant Street, Pittsburgh, PA, 15219, US
NUMBER OF CLAIMS: 46
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 6156
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Isolated and purified nucleic acids encoding green fluorescent proteins from Renilla reniformis and the green fluorescent protein encoded thereby are also provided. Mutants of the nucleic acid molecules and the modified encoded proteins are also provided. Compositions and combinations comprising the green fluorescent proteins and/or the luciferase are further provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:220992 USPATFULL
TITLE: Cytomegalovirus intron a fragments
INVENTOR(S): Thudium, Kent B., Oakland, CA, UNITED STATES
Selby, Mark, San Francisco, CA, UNITED STATES
PATENT ASSIGNEE(S): Chiron Corporation, Emeryville, CA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005191727	A1	20050901
APPLICATION INFO.:	US 2005-103805	A1	20050411 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-977066, filed on 12 Oct 2001, GRANTED, Pat. No. US 6893840

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-240502P	20001013 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Chiron Corporation, Intellectual Property - R440, P.O. Box 8097, Emeryville, CA, 94662-8097, US
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 1642
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Cytomegalovirus (CMV) Intron A fragments for expressing gene products are disclosed. Also described are expression vectors including the fragments, as well as methods of using the same.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:177230 USPATFULL
TITLE: Luciferase biosensor

INVENTOR(S): Fan, Frank, Madison, WI, UNITED STATES
Lewis, Martin Ken, Madison, WI, UNITED STATES
Shultz, John W., Verona, WI, UNITED STATES
Wood, Keith V., Mt. Horeb, WI, UNITED STATES
Butler, Braeden, Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005153310	A1	20050714
APPLICATION INFO.:	US 2004-957433	A1	20041001 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-510187P	20031010 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Schwegman, Lundberg, Woessner & Kluth, P.A., P.O. Box 2938, Minneapolis, MN, 55402, US
NUMBER OF CLAIMS: 83
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 35 Drawing Page(s)
LINE COUNT: 4350
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A modified beetle luciferase protein which is an environmentally sensitive reporter protein is provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:131092 USPATFULL
TITLE: Dual assay for evaluating activity and cytotoxicity of compounds in the same population of cells
INVENTOR(S): Blair, Wade Stanton, San Marcos, CA, UNITED STATES
Cao, Joan Qun, Carlsbad, CA, UNITED STATES
Isaacson, Jason, San Diego, CA, UNITED STATES
Patick, Amy Karen, Escondido, CA, UNITED STATES
PATENT ASSIGNEE(S): AGOURON PHARMACEUTICALS, INC. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005112551	A1	20050526
APPLICATION INFO.:	US 2003-721405	A1	20031124 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: AGOURON PHARMACEUTICALS, INC., 10350 NORTH TORREY PINES ROAD, LA JOLLA, CA, 92037, US
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 1614
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods are provided for evaluating the activity and cytoxicity of a compound in the same population of cells. These dual activity/cytoxicity methods are amenable for use in a high-throughput format. Also provided are humanized Renilla luciferase genes useful for the dual activity/cytoxicity assays and for use in a variety of reporter constructs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:92812 USPATFULL
TITLE: CYTOMEGALOVIRUS INTRON A FRAGMENTS
INVENTOR(S): Thudium, Kent B., Oakland, CA, UNITED STATES
Selby, Mark, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005079488	A1	20050414
	US 6893840	B2	20050517

APPLICATION INFO.: US 2001-977066 A1 20011012 (9)

NUMBER DATE
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PRIORITY INFORMATION: US 2000-240502P 20001013 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Anne Dollard, CHIRON CORPORATION, Intellectual Property - R440, P.O. Box 8097, Emeryville, CA, 94662-8097, US
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 1614
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cytomegalovirus (CMV) Intron A fragments for expressing gene products are disclosed. Also described are expression vectors including the fragments, as well as methods of using the same.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2005:421230 CAPLUS
DOCUMENT NUMBER: 143:400560
TITLE: Improved T-DNA vector for tagging plant promoters via high-throughput luciferase screening
AUTHOR(S): Remy, Serge; Thiry, Els; Coemans, Bert; Windelinckx, Saskia; Swennen, Rony; Sagi, Laszlo
CORPORATE SOURCE: Katholieke Universiteit Leuven, Louvain, Belg.
SOURCE: BioTechniques (2005), 38(5), 763-770
CODEN: BTNQDO; ISSN: 0736-6205
PUBLISHER: Informa Life Sciences Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Transferred DNA (T-DNA) tagging is a powerful tool for tagging and in planta characterization of plant genes on a genome-wide scale. An improved promoter tagging vector is described here, which contains the ***codon*** - ***optimized*** ***luciferase*** (luc+) reporter ***gene*** 31 bp from the right border of the T-DNA. Compared to the wild-type luciferase gene, this construct provides significantly increased reporter gene expression and a 40 times higher tagging frequency. The utility of the construct is demonstrated in banana, a tropical monocot species, by screening embryogenic cell colonies and regenerated plants with an ultrasensitive charged-coupled device (CCD) camera. The improved vector resulted in a luciferase activation frequency of 2.5% in 19,000 cell colonies screened. Detailed mol. anal. of flanking DNA sequences in a tagged line revealed insertion of the luciferase tag in a novel gene with near-constitutive expression.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2005:147092 CAPLUS
DOCUMENT NUMBER: 143:38869
TITLE: ***Codon*** - ***optimized*** Gaussia √ ***luciferase*** cDNA for mammalian ***gene*** expression in culture and in vivo
AUTHOR(S): Tannous, Bakhos A.; Kim, Dong-Eog; Fernandez, Juliet L.; Weissleder, Ralph; Breakefield, Xandra O.
CORPORATE SOURCE: Center for Molecular Imaging Research, Department of Radiology and Department of Neurology, Massachusetts General Hospital, Charlestown, MA, 02129, USA
SOURCE: Molecular Therapy (2005), 11(3), 435-443
CODEN: MTOHCK; ISSN: 1525-0016
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Photoproteins have played a major role in advancing our understanding of biol. processes. A broader array of biocompatible, nontoxic, and novel reporters can serve to expand this potential. Here we describe the properties of a luciferase from the copepod marine organism Gaussia

princeps. It is a monomeric protein composed of 185 aa (19.9 kDa) with a short coding sequence (555 bp) making it suitable for viral vectors. The humanized form of Gaussia luciferase (hGLuc) was efficiently expressed in mammalian cells following delivery by HSV-1 amplicon vectors. It was found to be nontoxic and naturally secreted, with flash bioluminescence characteristics similar to those of other coelenterazine luciferases. HGLuc generated over 1000-fold higher bioluminescent signal intensity from live cells together with their immediate environment and over 100-fold higher intensity from viable cells alone (not including secreted luciferase) or cell lysates, compared to humanized forms of firefly (hFLuc) and Renilla (hRLuc) luciferases expressed under similar conditions. Furthermore, hGLuc showed 200-fold higher signal intensity than hRLuc and intensity comparable to that of hFLuc in vivo under std. imaging conditions. Gaussia luciferase provides a sensitive means of imaging gene delivery and other events in living cells in culture and in vivo, with a unique combination of features including high signal intensity, secretion, and ATP independence, thus being able to report from the cells and their environment in real time.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:313293 CAPLUS
DOCUMENT NUMBER: 143:261002
TITLE: Codon optimization of bacterial luciferase (lux) for expression in mammalian cells
AUTHOR(S): Patterson, Stacey S.; Dionisi, Hebe. M.; Gupta, Rakesh K.; Sayler, Gary S.
CORPORATE SOURCE: Department of Microbiology, The University of Tennessee, Knoxville, TN, 37996, USA
SOURCE: Journal of Industrial Microbiology & Biotechnology (2005), 32(3), 115-123
CODEN: JIMBFL; ISSN: 1367-5435
PUBLISHER: Springer GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Expression of the bacterial luciferase (lux) system in mammalian cells would culminate in a new generation of bioreporters for in vivo monitoring and diagnostics technol. Past efforts to express bacterial luciferase in mammalian cells have resulted in only modest gains due in part to low overall expression of the bacterial genes. To optimize expression, we have designed and synthesized codon-optimized versions of the luxA and luxB genes from Photorhabdus luminescens. To evaluate these genes in vivo, stable HEK293 cell lines were created harboring wild type luxA and luxB (WTA/WTB), codon-optimized luxA and wild type luxB (COA/WTB), and codon-optimized versions of both luxA and luxB genes (COA/COB). Although mRNA levels within these clones remained approx. equal, LuxA protein levels increased significantly after codon optimization. On av., bioluminescence levels were increased by more than six-fold [5.times.105 vs 2.9.times.106 relative light units (RLU)/mg total protein] with the codon-optimized luxA and wild type luxB. Bioluminescence was further enhanced upon expression of both optimized genes (2.7.times.107 RLU/mg total protein). These results show promise toward the potential development of an autonomous light generating lux reporter system in mammalian cells.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 24 USPATFULL on STN DUPLICATE 5
ACCESSION NUMBER: 2004:190217 USPATFULL
TITLE: Rapidly degraded reporter fusion proteins
INVENTOR(S): Zdanovsky, Alexey, Madison, WI, UNITED STATES
Zdanovskaia, Marina, Madison, WI, UNITED STATES
Ma, Dongping, Madison, WI, UNITED STATES
Wood, Keith V., Mt. Horeb, WI, UNITED STATES
Almond, Brian, Fitchburg, WI, UNITED STATES
Wood, Monika G., Mt. Horeb, WI, UNITED STATES
PATENT ASSIGNEE(S): Promega Corporation (U.S. corporation)

NUMBER KIND DATE

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PATENT INFORMATION: US 2004146987 A1 20040729
APPLICATION INFO.: US 2003-664341 A1 20030916 (10)

NUMBER DATE
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PRIORITY INFORMATION: US 2002-411070P 20020916 (60)
US 2002-412268P 20020920 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Schwegman, Lundberg, Wossner & Kluth, P.A., P.O. Box 2938, Minneapolis, MN, 55402
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 3550
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A fusion polypeptide comprising a protein of interest which has a reduced half-life of expression, and a nucleic acid molecule encoding the fusion polypeptide, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 13 OF 24 USPATFULL on STN DUPLICATE 6
ACCESSION NUMBER: 2004:184473 USPATFULL
TITLE: Modified luciferase nucleic acids and methods of use
INVENTOR(S): Patterson, Stacey, Tampa, FL, UNITED STATES
Gupta, Rakesh, New Delhi, INDIA
Sayler, Gary, Blaine, TN, UNITED STATES
Dionisi, Hebe, Chubut, ARGENTINA

NUMBER KIND DATE
---------------- ------ --------
PATENT INFORMATION: US 2004142356 A1 20040722
APPLICATION INFO.: US 2003-697419 A1 20031030 (10)

NUMBER DATE
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PRIORITY INFORMATION: US 2002-422467P 20021030 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Stanley A. Kim, Ph.D., Esq., Akerman Senterfitt, Suite 400, 222 Lakeview Avenue, West Palm Beach, FL, 33402-3188
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1477
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The luxA and luxB genes from P. luminescens which encode for the luciferase protein of the bacterial luciferase system were modified to generate codon-optimized versions that are optimized for expression in mammalian cells. The codon-optimized bacterial luciferase enzyme system genes of the invention can be used to develop a mammalian bioluminescence bioreporter useful in various medical research and diagnostics applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 14 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2004:172512 USPATFULL
TITLE: Polynucleotide formulation for enhanced intracellular transfer
INVENTOR(S): Pitard, Bruno, Reze, FRANCE

NUMBER KIND DATE
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PATENT INFORMATION: US 2004132676 A1 20040708
APPLICATION INFO.: US 2004-467714 A1 20040317 (10)
WO 2002-EP2617 20020219

NUMBER DATE
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PRIORITY INFORMATION: EP 2001-420041 20010219
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP, 1300 I STREET, NW, WASHINGTON, DC, 20005
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 738
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a pharmaceutical composition comprising a polynucleotide and at least 2% (weight/volume), preferably 2 to 10%, of a nonionic copolymer of formula (I)OH(CH2CH2O)a(CH(CH3)CH2O)a(CH2CH2O)cH , in which a, b, and c are such that the polyoxypropylene portion has a molecular weight of between 1450 and 2050, and the polyoxyethylene portions constitute between 75 and 85% (weight:weight) of the copolymer. The composition is preferably free of cationic lipid or of sodium phosphate. The copolymer is intended to improve the transfer of the polynucleotide into, or the expression of the polynucleotide in, eukaryotic cells. A typical example of a copolymer corresponding to formula (I) is F68. A composition according to the invention is in particular useful in the gene therapy, vaccination and immunotherapy fields.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 15 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2004:40521 USPATFULL
TITLE: Neuronal activation in a transgenic model
INVENTOR(S): Barth, Alison L., Pittsburgh, PA, UNITED STATES

NUMBER KIND DATE
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PATENT INFORMATION: US 2004031065 A1 20040212
APPLICATION INFO.: US 2003-424164 A1 20030425 (10)

NUMBER DATE
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PRIORITY INFORMATION: US 2002-375644P 20020426 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 1620
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The disclosed invention provides compositions and methods for the identification of cells that are functionally activated after stimulation or during an activity while maintaining the viability of the identified cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 16 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2004:18872 USPATFULL
TITLE: Expression of polypeptides in chloroplasts, and compositions and methods for expressing same
INVENTOR(S): Mayfield, Stephen P., Cardiff, CA, UNITED STATES
Franklin, Scott, Cardiff, CA, UNITED STATES

NUMBER KIND DATE
---------------- ------ --------
PATENT INFORMATION: US 2004014174 A1 20040122
APPLICATION INFO.: US 2003-422628 A1 20030423 (10)

NUMBER DATE
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PRIORITY INFORMATION: US 2002-434957P 20021219 (60)
US 2002-375129P 20020423 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GRAY CARY WARE & FREIDENRICH LLP, 4365 EXECUTIVE DRIVE, SUITE 1100, SAN DIEGO, CA, 92121-2133
NUMBER OF CLAIMS: 207
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 5947
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods of producing one or more polypeptides in a plant chloroplast, including methods of producing polypeptides that specifically associate in a plant chloroplast to generate a functional protein complex, are provided. An isolated polynucleotide that includes (or encodes) a first ribosome binding sequence (RBS) operatively linked to a second RBS, such that the first RBS directs translation of a polypeptide in a prokaryote and the second RBS directs translation of the polypeptide in a chloroplast, also is provided, as is a vector containing such a polynucleotide, particularly a chloroplast vector and a chloroplast/prokaryote shuttle vector. Also provided is a synthetic polynucleotide, which is chloroplast codon biased. A plant cell that is genetically modified to contain a polynucleotide or vector as described above, as well as transgenic plants containing or derived from such a genetically modified cell, are provide. Polypeptides encoded by a synthetic polynucleotide as described also are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 17 OF 24 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10502737 IFIPAT;IFIUDB;IFICDB
TITLE: GENE DELIVERY FORMULATIONS AND METHODS FOR TREATMENT OF ISCHEMIC CONDITIONS; NUCLEIC ACID FUNCTIONALLY ENCODING A DEL-1 POLYPEPTIDE AND A COMPOUND THAT PROLONGS THE LOCALIZED BIOAVAILABILITY OF THE NUCLEIC ACID USED FOR STIMULATING ANGIOGENESIS
INVENTOR(S): Coleman; Michael E., Hauts-de-Seine, FR
MacLaughlin; Fiona, Northern Ireland, GB
Nordstrom; Jeffrey L., College Station, TX, US
Thiesse; Mary L., Houston, TX, US
Wang; Jijun, Pearland, TX, US
Young; Stuart, Portola Valley, CA, US
PATENT ASSIGNEE(S): Unassigned
PATENT ASSIGNEE PROBABLE: Valentis Inc (Probable)
AGENT: WONG CABELLO LUTSCH RUTHERFORD & BRUCCULERI, LLP, 20333 SH 249, SUITE 600, HOUSTON, TX, 77070, US

NUMBER PK DATE
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PATENT INFORMATION: US 2004009940 A1 20040115
APPLICATION INFORMATION: US 2003-419045 20030418

GRANTED PATENT NO.
APPLN. NUMBER DATE OR STATUS
---------------- -------- -----------------
CONTINUATION-IN-PART OF: WO 2001-US51307 20011019

NUMBER DATE
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PRIORITY APPLN. INFO.: US 2000-242277P 20001020 (Provisional)
US 2001-294454P 20010529 (Provisional)
US 2003-450507P 20030226 (Provisional)
FAMILY INFORMATION: US 2004009940 20040115
DOCUMENT TYPE: Utility
Patent Application - First Publication
FILE SEGMENT: CHEMICAL
APPLICATION
OTHER SOURCE: CA 140:105281

GOVERNMENT INTEREST:

(0002) This invention was made with government support under Grant No. DK48567-03 awarded by NIH/PHS. The Government has certain rights in the invention.

PARENT CASE DATA:

This application is a continuation-in-part of International Application Serial No. PCT/US01/51307, filed Oct. 19, 2001 and published in English under PCT Article 21(2) as International Publication No. WO02/061040, which claims the benefit of U.S. Provisional Application Serial No. 60/242,277, filed Oct. 20, 2000, and U.S. Provisional Application Serial No. 60/294,454 filed May 29, 2001; and this application also claims the benefit of U.S. Provisional Application Serial No. 60/450,507 filed Feb. 26, 2003, all of which are hereby incorporated by reference including drawings as if fully set forth herein in their entirety.

NUMBER OF CLAIMS: 70 24 Figure(s).

DESCRIPTION OF FIGURES:

FIG. 1. Effect of plasmid and poloxamer 188 concentration on delivery of expression plasmid in murine skeletal muscle.
FIG. 2. Expression of ***luciferase*** in tibialis anterior muscles of rats injected with ***luciferase*** expression plasmids formulated with isotonic saline compared with polymeric delivery systems.
FIGS. 3a and b. Expression plasmid maps for hDel-1.
FIG. 4. Expression of mDel-1 in tibialis anterior muscles of mice.
FIG. 5. Effects of Del-1 expression on capillary density in normoxic mouse skeletal muscle.
FIG. 6. Correlation of CD31 expression with expression of mDel-1 in normoxic tibialis anterior muscles of CD1 mice injected with different doses of formulated mDel-1 plasmid.
FIG. 7. Effects of hDel-1 plasmid on exercise tolerance following induction of hindlimb ischemia following ligation of the femoral artery.
FIG. 8. Effects of Del-1 and VEGF ***gene*** medicines in a rabbit model of hindlimb ischemia.
FIG. 9. ***Luciferase*** expression in murine myocardium following IM injection of formulated pLC1088 plasmid (10 microliters).
FIG. 10. Data shown represent ***luciferase*** expression in murine myocardium following direct intramyocardial injection (10 microliters).
FIG. 11a. Route of insertion of delivery catheter through the coronary sinus as viewed over the diaphragmatic aspect of the heart.
FIG. 11b. Placement of delivery catheter in the great cardiac vein as viewed over the sternocostal aspect of the heart.
FIG. 12. Depicts the ***sequence*** of human Del-1 (SEQ ID NO: 1) as utilized in the pDL1680 expression plasmid.
FIG. 13. Depicts the ***sequence*** of the pDL1680 human Del-1 expression plasmid (SEQ ID NO: 2).
FIG. 14. Depicts the increased reproducibility of expression with polymer based formulations.
FIG. 15. Depicts expression of hDel-1 mRNA within the myocardium of pigs treated by rIV delivery with either pDL1680 formulated in saline or pDL1680 formulated with 5% poloxamer 188.
FIG. 16. Nucleic acid ***sequence*** of a ***codon*** ***optimized*** VEGF 165 (SEQ ID NO: 3).
FIG. 17. CD31 Staining at Day 7 for (A) control, (B) Del-1, (C) VEGF, and (D) Del-1/VEGF.
FIG. 18. Grid representing poloxamer and reverse poloxamer characteristics.
FIG. 19. Characteristics of useful poloxamers for muscle delivery.
FIG. 20. Graphic depiction of the major vessels of the human lower limb with indications of the common sites of occusion.
FIG. 21. Location of beginning and ending pairs of administration sites in one embodiment.
FIG. 22. Depiction of linear, contiguous tracts of administration sites.
FIG. 23. Depiction of needle insertion angle and relative position in one embodiment.

AB The present inventors have developed a novel approach for efficient delivery of angiogenic factors to the cardiac and peripheral vasculature that avoids problems with toxicity inherent to existing delivery technologies. Vectors carrying coding sequences for angiogenic agents

including Del-1 or VEGF, or both, can be formulated with poloxamers or other polymers for delivery into ischemic tissue and delivered to areas of peripheral ischemia in a flow to no-flow pattern and to the heart by retrograde venous perfusion.

CLMN 70 24 Figure(s).

FIG. 1. Effect of plasmid and poloxamer 188 concentration on delivery of expression plasmid in murine skeletal muscle.

FIG. 2. Expression of ***luciferase*** in tibialis anterior muscles of rats injected with ***luciferase*** expression plasmids formulated with isotonic saline compared with polymeric delivery systems.

FIGS. 3a and b. Expression plasmid maps for hDel-1.

FIG. 4. Expression of mDel-1 in tibialis anterior muscles of mice.

FIG. 5. Effects of Del-1 expression on capillary density in normoxic mouse skeletal muscle.

FIG. 6. Correlation of CD31 expression with expression of mDel-1 in normoxic tibialis anterior muscles of CD1 mice injected with different doses of formulated mDel-1 plasmid.

FIG. 7. Effects of hDel-1 plasmid on exercise tolerance following induction of hindlimb ischemia following ligation of the femoral artery.

FIG. 8. Effects of Del-1 and VEGF ***gene*** medicines in a rabbit model of hindlimb ischemia.

FIG. 9. ***Luciferase*** expression in murine myocardium following IM injection of formulated pLC1088 plasmid (10 microliters).

FIG. 10. Data shown represent ***luciferase*** expression in murine myocardium following direct intramyocardial injection (10 microliters).

FIG. 11a. Route of insertion of delivery catheter through the coronary sinus as viewed over the diaphragmatic aspect of the heart.

FIG. 11b. Placement of delivery catheter in the great cardiac vein as viewed over the sternocostal aspect of the heart.

FIG. 12. Depicts the ***sequence*** of human Del-1 (SEQ ID NO: 1) as utilized in the pDL1680 expression plasmid.

FIG. 13. Depicts the ***sequence*** of the pDL1680 human Del-1 expression plasmid (SEQ ID NO: 2).

FIG. 14. Depicts the increased reproducibility of expression with polymer based formulations.

FIG. 15. Depicts expression of hDel-1 mRNA within the myocardium of pigs treated by rIV delivery with either pDL1680 formulated in saline or pDL1680 formulated with 5% poloxamer 188.

FIG. 16. Nucleic acid ***sequence*** of a ***codon*** ***optimized*** VEGF 165 (SEQ ID NO: 3).

FIG. 17. CD31 Staining at Day 7 for (A) control, (B) Del-1, (C) VEGF, and (D) Del-1/VEGF.

FIG. 18. Grid representing poloxamer and reverse poloxamer characteristics.

FIG. 19. Characteristics of useful poloxamers for muscle delivery.

FIG. 20. Graphic depiction of the major vessels of the human lower limb with indications of the common sites of occusion.

FIG. 21. Location of beginning and ending pairs of administration sites in one embodiment.

FIG. 22. Depiction of linear, contiguous tracts of administration sites.

FIG. 23. Depiction of needle insertion angle and relative position in one embodiment.

L8 ANSWER 18 OF 24 WPIDS

ACCESSION NUMBER: 2004-400665 [37] WPIDS

DOC. NO. CPI: C2004-150099

TITLE: New nucleic acid comprising a ***codon*** - ***optimized*** nucleotide ***sequence*** encoding a component of a bacterial ***luciferase*** system, useful for developing a mammalian bioluminescence bioreporter for medical research and diagnostic applications.

DERWENT CLASS: B04 D16

INVENTOR(S): DIONISI, H; GUPTA, R; PATTERSON, S; SAYLER, G

PATENT ASSIGNEE(S): (DION-I) DIONISI H; (GUPT-I) GUPTA R; (PATT-I) PATTERSON S; (SAYL-I) SAYLER G; (UYTE-N) UNIV TENNESSEE RES FOUND

COUNTRY COUNT: 106

PATENT INFORMATION:

PATENT NO KIND DATE WEEK LA PG

WO 2004042010 A2 20040521 (200437)* EN 43
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN
YU ZA ZM ZW
US 2004142356 A1 20040722 (200449)
AU 2003301883 A1 20040607 (200469)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004042010	A2	WO 2003-US34468	20031030
US 2004142356	A1 Provisional	US 2002-422467P	20021030
		US 2003-697419	20031030
AU 2003301883	A1	AU 2003-301883	20031030

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003301883	A1 Based on	WO 2004042010

PRIORITY APPLN. INFO: US 2002-422467P 20021030; US
2003-697419 20031030
AN 2004-400665 [37] WPIDS
AB WO2004042010 A UPAB: 20040611
NOVELTY - A nucleic acid comprising a ***codon*** - ***optimized*** nucleotide ***sequence*** encoding a component of a bacterial . ***luciferase*** system, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) a cell comprising the nucleic acid; and
(2) introducing the codon-optimized nucleic acid into a mammalian cell.
USE - The nucleic acid is useful for developing a mammalian bioluminescence bioreporter for medical research and diagnostic applications.
Dwg.0/3

L8 ANSWER 19 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2003:330756 USPATFULL
TITLE: Rationally designed antibodies
INVENTOR(S): Bowdish, Katherine S., Del Mar, CA, UNITED STATES
Frederickson, Shana, Solana Beach, CA, UNITED STATES
Renshaw, Mark, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003232972	A1	20031218
APPLICATION INFO.:	US 2002-307724	A1	20021202 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-6593, filed on 5 Dec 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-251448P	20001205 (60)
	US 2001-288889P	20010504 (60)
	US 2001-294068P	20010529 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Mark Farber, c/o Alexion Pharmaceuticals, Inc., 352 Knotter Drive, Cheshire, CT, 06410
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 36 Drawing Page(s)
LINE COUNT: 2513

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Antibodies or fragments thereof having at least two CDR regions replaced or fused with biologically active peptides are described. Compositions containing such antibodies or fragments thereof are useful in therapeutic and diagnostic modalities.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 20 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2003:196059 USPATFULL
TITLE: Modified railroad worm red luciferase coding sequences
INVENTOR(S): Nawotka, Kevin A., Alameda, CA, UNITED STATES
Zhang, Weisheng, Fremont, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003135871	A1	20030717
APPLICATION INFO.:	US 2002-223072	A1	20020815 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-312697P	20010815 (60)
	US 2001-312687P	20010815 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: COOLEY GODWARD LLP (R&P), FIVE PALO ALTO SQUARE, 3000 EL CAMINO REAL, PALO ALTO, CA, 94306-0663
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 1515
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Native and modified forms of Phrixothrix hirtus red luciferase are described. These native and modified forms of luciferase can be used, for example, as reporter molecules in host cells and/or transgenic animals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 21 OF 24 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10365061 IFIPAT;IFIUDB;IFICDB
TITLE: NUCLEIC ACID FORMULATIONS FOR GENE DELIVERY AND METHODS OF USE; GENE DELIVERY COMPRISING A NUCLEIC ACID AND AN ANIONIC POLYMER IS DISCLOSED. THE ANIONIC POLYMER INCLUDES ANIONIC AMINO ACID POLYMER OR POLY-AMINO ACID (SUCH AS POLY-L-GLUTAMIC ACID, POLY-D-GLUTAMIC ACID, POLY-L-ASPARTIC ACID, POLY-D-ASPARTIC
INVENTOR(S): Fewel; Jason, The Woodlands, TX, US
MacLaughlin; Fiona, Houston, TX, US
Nicol; Francois, Menlo Park, TX, US
Rolland; Alain, The Woodlands, TX, US
Smith; Louis C., Houston, TX, US
PATENT ASSIGNEE(S): Valentis, Inc., US
AGENT: LYON & LYON LLP/ VALENTIS INC., 633 WEST FIFTH STREET, SUITE 4700, LOS ANGELES, CA, 90071-2066, US

	NUMBER	PK	DATE
PATENT INFORMATION:	US 2003109478	A1	20030612
APPLICATION INFORMATION:	US 2002-234406		20020903

	APPLN. NUMBER	DATE	GRANTED PATENT NO. OR STATUS
CONTINUATION OF:	WO 2001-US6953	20010302	

	NUMBER	DATE
PRIORITY APPLN. INFO.:	US 2000-187236P	20000303 (Provisional)

US 2001-261751P 20010116 (Provisional)
FAMILY INFORMATION: US 2003109478 20030612
DOCUMENT TYPE: Utility
Patent Application - First Publication
FILE SEGMENT: CHEMICAL
APPLICATION

NUMBER OF CLAIMS: 85 20 Figure(s).
DESCRIPTION OF FIGURES:
FIG. 1 shows SEAP serum concentrations at day 7 post injection of SEAP pDNA/empty DNA mixtures in the tibialis cranialis muscle of CD-1 mice with electroporation. Various SEAP pDNA amounts and empty pDNA excess (relative to the coding pDNA) were administered.
FIG. 2 shows SEAP serum concentrations at day 7 post injection of naked SEAP pDNA or SEAP pDNA/anionic polymer mixtures in the tibialis cranialis muscle of CD-1 mice with electroporation and DNA concentration of 2.5 micrograms in 50 microliters (half this dose per leg). The concentration of the anionic polymer in the injected solution varied as indicated on the graph.
FIG. 3 shows SEAP serum concentrations at day 7 post injection of naked SEAP pDNA or SEAP pDNA/anionic polymer mixtures in the tibialis cranialis muscle of CD-1 mice with electroporation and the amount of SEAP pDNA administered per animal was regularly (unless mentioned) 25 micrograms in 50 microliters (half this dose per leg).
FIG. 4 shows SEAP serum concentrations at day 7 post injection of naked SEAP pDNA or SEAP pDNA/anionic polymer mixtures in the gastrocnemius muscle of CD-1 mice and electroporation of the tissue. The concentration of the anionic polymer in the injected solution varied as indicated on the graph.
FIG. 5 shows SEAP serum concentrations at day 7 as a function of the amount of SEAP pDNA injected in different formulations as indicated: A in the tibialis cranialis muscle of CD-1 mice; B in the gastrocnemius muscle of CD-1 mice comparing either naked SEAP pDNA or a mixture of SEAP pDNA and a poly-L-glutamic acid at 6.0 mg/ml.
FIG. 6 shows ***luciferase*** expression after direct intramyocardial injection of plasmid DNA formulated in saline versus polyglutamic acid.
FIG. 7 shows hF.IX serum concentrations at day 7 post injection of naked hF.IX pDNA or hF.IX pDNA/poly-L-glutamic acid mixtures in the tibialis muscle of C57BL/6 mice and electroporation of the tissue. The concentration of the anionic polymer in the injected solution varied as indicated on the graph.
FIG. 8 shows hF.IX expression in plasma of immune deficient (SCID beige) mice.
FIG. 9 depicts the immunohistology and fiber-type of hF.IX expressing myocytes in SCID mouse muscle.
FIG. 10 A depicts plasma hF.IX levels determined by ELISA in dogs following intramuscular injection of plasmid augmented by electroporation at different numbers of sites. Values are means +-SEM with n=3 for each group. FIG. 10B shows a western blot of purified hF.IX using treated animal serum as the primary antibody. Lane A, molecular marker; lane B, negative control serum; lane C, positive control (canine serum spiked with rabbit anti-hF.IX antibodies; lane D, serum from a female dog from the 6 injection group (peak expression hF.IX 35.71 ng/ml); lane E, serum from a male dog from the 12 injection group (peak hF.IX expression 47.9 ng/ml).
FIG. 11 depicts the duration of retention of the mouse EPO plasmid DNA following delivery by electroporation using saline and poly-L-glutamic acid formulations.
FIG. 12 depicts EPO expression and hematocrit in mice following delivery of the mouse EPO ***gene*** by electroporation using saline and poly-L-glutamic acid formulations.
FIG. 13 depicts the results of the EPO expression in mice following delivery of the mouse EPO ***gene*** by electroporation using saline and poly-L-glutamic acid formulations over a three month time frame.
FIG. 14 depicts a comparison of hINF alpha ***gene*** expression after delivery in saline versus polyglutamate. A depicts the results using a 50 microgram dose of plasmid DNA while B depicts the results of administration of a 5 microgram dose of plasmid DNA.
FIG. 15 shows the ability of poly-L-glutamate and poloxamer formulations to protect DNA from nuclease degradation. Panel A represents a DNA in saline formulation; Panel B represents DNA formulated in 5% Pluronic F68; Panel C represents DNA formulated in 6 mg/ml poly-L-glutamate. Lane A, negative control of plasmid DNA without DNase; lane B, positive control of plasmid DNA and DNase mixed 1:1; lane C, DNase diluted 1:1; lane D, DNase diluted 1:10; lane E, DNase diluted 1:100; lane F, DNase diluted 1:1,000; lane G, DNase diluted 1:10,000.

FIG. 16 depicts the results of long term biological stability of plasmid DNA encoding SEAP formulated in 6 mg/ml poly-Lglutamate under different storage conditions. A, lyophilization and storage at 4 degrees C. for 105 days; B, freezing of a liquid formulation with storage at-20 degrees C. for 105 days; C, liquid storage at 4 degrees C. for 105 days; D, liquid storage at room temperature for 105 days; E, liquid storage at 37 degrees C. for 105 days; F, liquid storage at 50 degrees C. for 8 days; G, liquid formulation subject to freeze/thawing; H, fresh DNA formulated on poly-L-glutamate; I, fresh DNA without poly-L-glutamate.

FIG. 17 depicts the plasmid map for pFN0945, an expression plasmid carrying the ***gene*** for hF.IX. The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 3.

FIG. 18 depicts the plasmid map for pFN1645, an expression plasmid carrying an ***codon*** ***optimized*** ***gene*** for hF.IX. The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 4.

FIG. 19 depicts the plasmid map for pEP1403, an expression plasmid carrying the mouse erythropoietin ***gene*** . The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 2.

FIG. 20 depicts the plasmid map for pIF0921, an expression plasmid carrying the human interferon alpha ***gene*** . The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 1.

AB A nucleic acid formulation for use in gene delivery comprising a nucleic acid and an anionic polymer is disclosed. Examples of the anionic polymer includes aniionic amino acid polymer or poly-amino acid (such as poly-L-glutamic acid, poly-D-glutamic acid, poly-L-aspartic acid, poly-D-aspartic acid), poly-acrylic acid, polynucleotides, poly galacturonic acid, and poly vinyl sulfate.

CLMN 85 20 Figure(s).

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FIG. 10 A depicts plasma hF.IX levels determined by ELISA in dogs following intramuscular injection of plasmid augmented by electroporation at different numbers of sites. Values are means +-SEM with n=3 for each group. FIG. 10B shows a western blot of purified hF.IX using treated animal serum as the primary antibody. Lane A, molecular marker; lane B, negative control serum; lane C, positive control (canine serum spiked

with rabbit anti-hF.IX antibodies; lane D, serum from a female dog from the 6 injection group (peak expression hF.IX 35.71 ng/ml); lane E, serum from a male dog from the 12 injection group (peak hF.IX expression 47.9 ng/ml).

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FIG. 13 depicts the results of the EPO expression in mice following delivery of the mouse EPO ***gene*** by electroporation using saline and poly-L-glutamic acid formulations over a three month time frame.

FIG. 14 depicts a comparison of hINF alpha ***gene*** expression after delivery in saline versus polyglutamate. A depicts the results using a 50 microgram dose of plasmid DNA while B depicts the results of administration of a 5 microgram dose of plasmid DNA.

FIG. 15 shows the ability of poly-L-glutamate and poloxamer formulations to protect DNA from nuclease degradation. Panel A represents a DNA in saline formulation; Panel B represents DNA formulated in 5% Pluronic F68; Panel C represents DNA formulated in 6 mg/ml poly-L-glutamate. Lane A, negative control of plasmid DNA without DNase; lane B, positive control of plasmid DNA and DNase mixed 1:1; lane C, DNase diluted 1:1; lane D, DNase diluted 1:10; lane E, DNase diluted 1:100; lane F, DNase diluted 1:1,000; lane G, DNase diluted 1:10,000.

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FIG. 18 depicts the plasmid map for pFN1645, an expression plasmid carrying an ***codon*** ***optimized*** ***gene*** for hF.IX. The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 4.

FIG. 19 depicts the plasmid map for pEP1403, an expression plasmid carrying the mouse erythropoietin ***gene*** . The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 2.

FIG. 20 depicts the plasmid map for pIF0921, an expression plasmid carrying the human interferon alpha ***gene*** . The ***sequence*** of the complete plasmid is disclosed as SEQ. ID. NO. 1.

L8 ANSWER 22 OF 24 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-141743 [14] WPIDS
DOC. NO. CPI: C2004-056657
TITLE: Assaying for a potential anti-hepatitis C virus (HCV) agent by contacting cells comprising a nucleic acid construct comprising an HCV internal ribosome entry site (IRES) and a reporter gene, with a library of nucleic acids .
DERWENT CLASS: B04 D16
INVENTOR(S): HUANG, P; KINSELLA, T; LU, H H; MARTINEZ, A
PATENT ASSIGNEE(S): (HUAN-I) HUANG P; (KINS-I) KINSELLA T; (LUHH-I) LU H H; (MART-I) MARTINEZ A; (RIGE-N) RIGEL PHARM INC
COUNTRY COUNT: 103
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2003219723	A1	20031127	(200414)*		46
WO 2003099209	A2	20031204	(200414)	EN	

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL
PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW
AU 2003233590 A1 20031212 (200443)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003219723	A1	US 2002-152163	20020520
WO 2003099209	A2	WO 2003-US15809	20030520
AU 2003233590	A1	AU 2003-233590	20030520

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003233590	A1 Based on	WO 2003099209

PRIORITY APPLN. INFO: US 2002-152163 20020520
AN 2004-141743 [14] WPIDS
AB US2003219723 A UPAB: 20040226
NOVELTY - Assaying for a potential anti-hepatitis C virus (HCV) agent comprises:
(1) providing cells comprising a nucleic acid construct comprising an HCV internal ribosome entry site (IRES) and a reporter gene;
(2) contacting the cells with a library of nucleic acids, where the nucleic acid are expressed in the cells forming candidate agents; and
(3) screening the cells for altered expression of the reporter gene.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included a method for assaying for a potential antiviral agent.
USE - The method is useful for assaying for a potential anti-hepatitis C virus (HCV) agent (claimed).
Dwg.0/10

L8 ANSWER 23 OF 24 Elsevier BIOBASE COPYRIGHT 2006 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 2003124478 ESBIOBASE
TITLE: Tetracycline-inducible system for regulation of skeletal muscle-specific gene expression in transgenic mice
AUTHOR: Grill M.A.; Bales M.A.; Fought A.N.; Rosburg K.C.; Munger S.J.; Antin P.B.
CORPORATE SOURCE: M.A. Grill, Dept. of Cell Biology and Anatomy, University of Arizona, PO Box 245044, Tucson, AZ 85724, United States.
E-mail: pba@email.arizona.edu
SOURCE: Transgenic Research, (2003), 12/1 (33-43), 42 reference(s)
CODEN: TRSEES ISSN: 0962-8819
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Tightly regulated control of over-expression is often necessary to study one aspect or time point of ***gene*** function and, in transgenesis, may help to avoid lethal effects and complications caused by ubiquitous over-expression. We have utilized the benefits of an optimized tet-on system and a modified muscle creatine kinase (MCK) promoter to generate a skeletal muscle-specific, doxycycline (Dox) controlled over-expression system in transgenic mice. A DNA construct was generated in which the ***codon*** ***optimized*** reverse tetracycline transactivator (rtTA) was placed under control of a skeletal muscle-specific version of the mouse MCK promoter. Transgenic mice containing this construct expressed rtTA almost exclusively in skeletal muscles. These mice were crossed to a second transgenic line containing a bi-directional promoter centered on a tet responder element driving both a ***luciferase*** reporter ***gene*** and a tagged ***gene*** of interest; in this case the calpain inhibitor calpastatin. Compound hemizygous mice showed

high level, Dox dependent muscle-specific ***luciferase*** activity often exceeding 10,000-fold over non-muscle tissues of the same mouse. Western and immunocytochemical analysis demonstrated similar Dox dependent muscle-specific induction of the tagged calpastatin protein. These findings demonstrate the effectiveness and flexibility of the tet-on system to provide a tightly regulated over-expression system in adult skeletal muscle. The MCKrtTA transgenic lines can be combined with other transgenic responder lines for skeletal muscle-specific over-expression of any target ***gene*** of interest.

L8 ANSWER 24 OF 24 Elsevier BIOBASE COPYRIGHT 2006 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 2002265865 ESBIOBASE
TITLE: Synonymous codon usage bias and the expression of human glucocerebrosidase in the methylotrophic yeast, Pichia pastoris
AUTHOR: Sinclair G.; Choy F.Y.M.
CORPORATE SOURCE: G. Sinclair, Department of Biology, Centre for Biomedical Research, University of Victoria, P.O. Box 3020 STN CSC, Victoria, BC V8W 3N5, Canada.
E-mail: grahams@uvic.ca
SOURCE: Protein Expression and Purification, (2002), 26/1 (96-105), 52 reference(s)
CODEN: PEXPEJ ISSN: 1046-5928
PUBLISHER ITEM IDENT.: S1046592802005260
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The lysosomal hydrolase glucocerebrosidase catalyzes the penultimate step in the breakdown of membrane glycosphingolipids. An inherited deficiency in this enzyme leads to the onset of Gaucher disease, the most common lysosomal storage disorder. Exogenous sources of this protein are required for biochemical and biophysical investigations and enzyme replacement therapy of Gaucher disease. Heterologous expression of glucocerebrosidase has been successful in mammalian and insect cell lines and although its use in enzyme replacement therapy of Gaucher disease has proven efficacious, current production levels limit the availability of the enzyme. Initial attempts to express human glucocerebrosidase using the methylotrophic yeast Pichia pastoris had limited success, despite significant levels of transcription. Using fragments of the glucocerebrosidase cDNA fused to the ***luciferase*** cDNA as a translational read-through reporter, the impact of synonymous codon usage bias on protein expression in P. pastoris was examined. A table of preferred codons was determined for P. pastoris and the codon usage of a 186-bp fragment of the glucocerebrosidase ***gene*** was optimized to that of the P. pastoris preferred set. A second construct with altered G + C content but no ***codon*** ***optimization*** was created for comparison. While the native glucocerebrosidase coding region limited ***luciferase*** activity to baseline levels, the ***codon*** ***optimized*** and G + C altered constructs increased ***luciferase*** activity 10.6- and 7.5-fold, respectively. Optimized G + C content, regardless of corresponding ***codon*** ***optimization***, appears to be the major contributor to increased translational efficiency in this heterologous expression host. .COPYRGT. 2002 Elsevier Science (USA). All rights reserved.

=> d his

L1 QUE (LUXA OR LUCIFERASE#)

L2 148354 S L1
L3 77196 S (GENE OR SEQUENCE OR POLYNUCLEOTIDE OR CLONE)(S)L2
L4 50 S (CODON-OPTIMIZ? OR(CODON(W)OPTIMIZ?))(S)L3
L5 2 S LEUCINE (S)L4
L6 6 S (AMINO(W)ACID)(S)L4
L7 1 S LUMINESCENS?(S)L4
L8 24 DUP REM L4 (26 DUPLICATES REMOVED)

L9 2 DUP REM L5 (0 DUPLICATES REMOVED)

=> log y